

APPLICANT INFORMATION

Applicant Name_____ Powell County, Montana _____
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Department_____ Planning Department _____

PARTICIPATING PARTNER

Principle Contact_____ Mayor Mary Ann Fraley _____
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County_____ Powell _____
State_____ Montana _____
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PARTICIPATING PARTNER

Principle Contact Chris Laity, PE
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DATE SUBMITTED

February 15, 2012

DATE RECEIVED

PROJECT TITLE: Powell County GIS Improvements

While grant applications can vary greatly in scope and detail, their primary purpose is to convey the ideas and priorities of local stakeholders and establish guiding principles for a desired course of action. To that aim, Powell County proposes a project to improve its existing Geographic Information System (GIS) resources with assistance by Great West Engineering and to formulate a strategic guide to oversee the implementation of a countywide GIS Program. At its core, this grant application empowers Powell County to orchestrate fundamental organizational changes to ensure the implementation of an efficient, effective, and viable GIS strategy.

RELEVANCE and PUBLIC BENEFIT

Powell County recognizes that a Geographic Information System (GIS) provides local officials, government agencies, researchers, and property owners with effective data, tools, and analytical services to assist in policy analysis, planning and monitoring of both the built and the natural environments. Despite acknowledging GIS is a proven tool, Powell County has been slow to fully employ this astonishing technology within all Departments to visualize and process spatial

information. A number of reasons may be contributing factors preventing the County from undertaking the induction of a countywide GIS with the lack of funds being the chief among them – a circumstance all too prevalent in rural areas.

With that premise, Powell County is proud to submit this application for consideration to the Grant Review Subcommittee of the Montana Land Information Advisory Cooperation. The submission of this grant application coincides with a recent decision by the County Commissioners to expand the role of GIS in their policymaking efforts and to see more Departments use GIS to improve their delivery of services. Specifically, the Commissioners targeted the Road Crews and the Planning Department for the initial effort to create and maintain geospatial information. The County Commissioners are also responding to a renewed interest by City of Deer Lodge officials to simplify the exchange of spatial data between the two entities especially in light of last spring's Cottonwood Creek flood.

The opportunity provided by the MLIA Grant, enables Powell County to realize advantages from a GIS Program beyond what any one Department or individual can achieve. It adds to an already functioning Enhanced 9-1-1 System with a GIS Program with much needed public asset management capabilities. In truth, the County has already accepted the value of this message by committing to the GIS planning process and the submission of this grant application is a logical first step.

Powell County is confident the project by promoting the efficient and effective application of GIS resources is consistent with the following defined Land Information Plan Grant Category Priorities:

B2.1 – *Regional GIS consortiums that leverage a multi-jurisdictional approach to problem solving and GIS analysis can demonstrate the value of GIS to policy makers.*

Anticipated products or results:

- Creates an inventory and management system for roads, bridges, and culverts;
- Allows County Commissioners to access spatial information when considering infrastructure improvements;
- Improves the efficiency of delivering information to the public, as well to other agencies through data sharing opportunities.

B2.2 - *Localized GIS solutions that demonstrate the value of GIS in improving the quality of life for Montana citizens and build grass roots support for location based services.*

Anticipated products or results:

- Improves the positional accuracy of Deer Lodge and Powell County parcels;
- Enables the build out of data layers for water and land resources from an improved base map;
- Provides GIS related services to the community a reduces cost and added value;
- Facilitates the exchange of public information via maps and web-based displays.

SCOPE of WORK

Powell County truly appreciates the merits of GIS, however; the County has only literally scratched the surface of this technology by compiling addresses for emergency responders and preliminary zoning applications over the last five years. Consequently, the County wants to overcome this under achievement by submitting three separate, but intrinsically linked projects for the MLIA Grant Review Subcommittee to consider: (1) rectify parcel data for the City of Deer Lodge and the rural hamlets of Avon, Garrison, Helmville, Ovando, and Racetrack (to aid base mapping); (2) acquire handheld GPS devices with training for use by the County Road Crews to collect and inventory information on public infrastructure; and (3) develop and implement an all-encompassing GIS Needs Assessment and Strategic Plan incorporating the two earlier tasks as a basis to facilitate the data exchange and analysis capabilities between twelve City and County Departments as well as numerous public agencies sharing the responsibility of conserving the County's landscapes.

Goal #1. Parcel Rectification.

Powell County's ability to ensure accurate and current parcel polygon data is critical to the overall success of its planned GIS since parcels form the basis for the majority of the data sets. The positional accuracy of the County's parcel data varies with the greatest amount of error occurring within Deer Lodge and its periphery. Generally, the polygons are relatively accurate by their origins stemming from available legal descriptions, however; there is no reassurance that they will relate to GPS captured property corners, section corners, or features. Crucially, the Deer Lodge is the principal city in the County and both City and County Growth Policy Plans designate the City and the surrounding land to accommodate most of the future growth within Powell County. The County

intends to improve the accuracy by aligning the existing parcel data to digital orthophotography, base maps, and GPS or survey methods.

Objective #1.1.

Powell County intends to rectify data for approximately 1,615 parcels to ensure a revised base map corresponds with landmarks and structures visible on existing digital orthophotography. The rectified parcel data enables the County to demonstrate a level of accuracy missing from the current GIS and sought after from the public and professionals.

Objective #1.2.

The parcel rectification enables Powell County to use and display data sets produced by the United States Environmental Protection Agency and the Montana Department of Environmental Quality as both agencies proceed with the Clark Fork River Superfund Remediation. Especially, the recently flown and processed six-inch, digital orthophotography, and LIDAR for Deer Lodge Valley the County expects to receive from MT DEQ in the spring of 2012.

Goal #2. Field Data Collection.

Within its 2,333 square miles, Powell County maintains 279 miles of roads, sixty-six bridges, and hundreds of culverts extending through three Road Districts.

Compounding the challenge, the County relies on accounts and observations from the road crews and aging paper-based maps to locate these features when performing maintenance activities. The Board of County Commissioners through the assistance of their on-call engineer (Great West Engineering), strive to make the County's road network safe and efficient for all uses and modes of travel. The County Commissioners acknowledge it is a daunting challenge for a rural government to design, build, and maintain these publicly owned roads and bridges. To ease this responsibility, the County Commissioners want to utilize GPS field data collection to maintain the road network's asset inventories and map the location of its various components. GPS applications allow the road crews to update the positional accuracy of road amenities as well as add attribute information.

Objective #2.1.

To have the County Road Supervisors from each of the three Districts initiate a data collection and management procedure to map with a handheld GPS every bridge, culvert, and other road network element for upload to GIS. Furthermore, the Road Supervisors will have the capacity to hyperlink digital photos. Great West Engineering will devise a procedure guaranteeing spatial accuracy, and describes the collected data (example: size, type, condition, and year of installation) in a consistent, reliable, and accessible manner to meet engineering standards.

Objective #2.2.

To create a bridge and road management system for all County owned bridges and roads as a means to facilitate the decision-making process regarding surface maintenance, rehabilitation, and reconstruction.

Objective #2.3.

To expand the Planning Department's ability to collect and catalog digital map data of public utility improvements such as buried underground cables when processing Right-of-Way Approach Permits.

Goal #3. Develop and Implement a GIS Needs Assessment and Strategic Plan.

The County selected to pursue a Needs Assessment and Strategic Plan since its very essence embodies a group dynamic process, which enables the organization to address immediate issues, examine trends, assess capabilities, re-examine options, define a new sense of direction, and develop an action plan to put the new direction into effect. The Needs Assessment and Strategic Plan will act as the framework document for establishing the initial vision, goals, objectives, requirements, and other parameters associated with implementing a multiple component GIS Program for Powell County. Additionally, the document will conceive a method to systematize the creation, maintenance, and processing of land records. Where Powell County has an immediate use for the products of Goals #1 and 2, this Goal encapsulates a vision of a GIS Program satisfying the requirements of County Departments for a period of five years with the end products being: (1) consultations with County staff and external

stakeholders; (2) an inventory of existing computer facilities throughout the organization; (3) implementation recommendations; and (4) schedule projections and estimated expenses. The Plan will also explore ways to integrate the program with the City of Deer Lodge (if integration is not feasible, the document will serve as a helpful reference if the City embarks on a separate GIS agenda).

Objective #3.1.

Powell County will entrust Great West Engineering to compose the Needs Assessment and Strategic Plan to guide the County towards recommending best measures to promote and coordinate the use of GIS technologies. Furthermore, the document will help Departments to identify requirements for hardware / software, training, and financing.

Objective #3.2.

The Needs Assessment and Strategic Plan will devise a scheme to infuse better accuracy, security, and integrity of spatial data and investigate measures to address the needs of Departments collectively instead of individually through common standards, procedures, and methodologies.

Objective #3.3

Great West Engineering will amend the recently adopted 2011 Powell County Capital Improvements Plan to include program investments proposed by the GIS Needs Assessment and Strategic Plan.

Schedule

Year 1:

Completion of Needs Assessment & Strategic Plan.

Acquisition of GPS Device and Software.

Initiate field data collection for land features and property corners necessary for parcel data rectification.

Year 2:

Implementation of Strategic Plan.

Acquire GIS computer system and 2nd ArcGIS license.

Continue field data collection of land features and parcel data rectification.

Year 3:

Revisit and update Strategic Plan.

Acquire plotter/scanner necessary to datalink COS, deed information, and other relevant land information to parcel data.

Continue field data collection of land features and parcel data rectification.

Year 4:

Advance field data collection of land features and parcel data rectification.

Year 5:

Complete final parcel data rectification.

PROJECT MANAGEMENT & ORGANIZATION

Powell County Planning Department under the guidance of its Director, Brian P. Bender will administrate the project. Mr. Bender will rely on the expertise of Great West Engineering to complete the Powell County GIS Program. Great West Engineering has an excellent record of accomplishment of providing high quality and effective services to its clients.

The Powell County Planning Department has an outstanding reputation of fostering innovative land use practices, fulfilling statutory obligations, securing grants, and delivering credible leadership. The Department is the leading advocate GIS within the organization as it provides mapping services, and GIS related research and administrative support to citizens, Deer Lodge officials, and other County staff. Mr. Bender is a member of the American Institute of Certified Planners and the Planning Director of Powell County, Montana since January 2011. Mr. Bender has over twelve years of experience collaborating with elected and appointed officials in both rural and urban communities on zoning enforcement, plan making and implementation, and citizen participation.

BUDGET JUSTIFICATION

Powell County has estimated five years for completion of this project. Costs associated with the project are mainly associated personnel, consulting, and survey needed to plan, research and review fieldwork, as well as the purchase new GPS unit, computer system, and plotter / scanner. Current hourly rates for salaries and fringe benefits have an upward adjustment by about four-percent annually to account for the probable salaries that would be in effect at the time this project begins. As a useful reference, this section includes a detailed budget table by Fiscal Year showing the estimated costs for all categories.

- **Salaries and Wages:**

Personnel from the Powell County Planning Department and Road District Crews.

- **Fringe Benefits:**

The amount assigned to fringe benefits is 31.7-percent of the salaries and wages of Powell County employees. These include health and unemployment insurance, workers compensation, FICA & Medicare, and retirement.

- **Travel:**

This application anticipates travel costs for County staff, consultants, and surveyors to incur at a rate of \$0.55 per mile.

- **Equipment:**

This application anticipates equipment costs for the acquisition of a Trimble 6000 GEO XH, Terra Sync and Pathfinder Pro software for the mapping and collection of data. The acquisition of equipment continues with a HP Z400 workstation computer system, HP 815mfp Design jet Plotter, and ArcView 10.x software.

- **Supplies:**

Supplies include minor office incidentals and plotting supplies for field survey plots.

○ **Contracted Services:**

Registered Land Surveyors and GIS Consultants will provide professional contract services and consist of surveys/deed research, pin locating, collection of coordinate data, creation of feature data sets, and training for Powell County staff how to use GIS equipment. Powell County will prepare and administrate the contracts based on a submitted Scope of Work with a not to exceed amount for time and materials.

○ **Other:**

None.

FISCAL YEAR 2013 ACTUAL BUDGET SUMMARY & TABLE

Total Expended by Powell County = \$33,425.00

Total MLIA Share = \$59,700.00

Category	MLIA Share	Applicant Share	Other Share	Total
1. Personnel	\$0.00	\$25,000.00	\$0.00	\$25,000.00
2. Fringe Benefits	\$0.00	\$7,925.00	\$0.00	\$7,925.00
3. Travel	\$3,000.00	\$0.00	\$0.00	\$3,000.00
4. Equipment	\$10,600.00	\$0.00	\$0.00	\$10,600.00
5. Supplies	\$500.00	\$500.00	\$0.00	\$1,000
6. Contractual	\$45,600.00	\$0.00	\$0.00	\$30,000.00
7. Other	\$0.00	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$59,700.00	\$33,425.00	\$0.00	\$93,125.00

FISCAL YEAR 2014 ACTUAL BUDGET SUMMARY & TABLE

Total Expended by Powell County = \$33,425.00

Total MLIA Share = \$56,100.00

Category	MLIA Share	Applicant Share	Other Share	Total
1. Personnel	\$0.00	\$25,000.00	\$0.00	\$25,000.00
2. Fringe Benefits	\$0.00	\$7,925.00	\$0.00	\$7,925.00
3. Travel	\$3,000.00	\$0.00	\$0.00	\$3,000.00
4. Equipment	\$7,000.00	\$0.00	\$0.00	\$7,000.00
5. Supplies	\$500.00	\$500.00	\$0.00	\$1,000.00
6. Contractual	\$45,600.00	\$0.00	\$0.00	\$30,000.00
7. Other	\$0.00	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$56,100.00	\$33,425.00	\$0.00	\$89,525.00

FISCAL YEAR 2015 ACTUAL BUDGET SUMMARY & TABLE

Total Expended by Powell County = \$33,425.00

Total MLIA Share = \$71,000.00

Category	MLIA Share	Applicant Share	Other Share	Total
1. Personnel	\$0.00	\$25,000.00	\$0.00	\$25,000.00
2. Fringe Benefits	\$0.00	\$7,925.00	\$0.00	\$7,925.00
3. Travel	\$3,000.00	\$0.00	\$0.00	\$3,000.00
4. Equipment	\$22,000.00	\$0.00	\$0.00	\$22,000.00
5. Supplies	\$500.00	\$500.00	\$0.00	\$1,000.00
6. Contractual	\$45,600.00	\$0.00	\$0.00	\$30,000.00
7. Other	\$0.00	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$71,100.00	\$33,425.00	\$0.00	\$104,525.00

FISCAL YEAR 2016 ACTUAL BUDGET SUMMARY & TABLE

Total Expended by Powell County = \$33,425.00

Total MLIA Share = \$49,100.00

Category	MLIA Share	Applicant Share	Other Share	Total
1. Personnel	\$0.00	\$25,000.00	\$0.00	\$25,000.00
2. Fringe Benefits	\$0.00	\$7,925.00	\$0.00	\$7,925.00
3. Travel	\$3,000.00	\$0.00	\$0.00	\$3,000.00
4. Equipment	\$0.00	\$0.00	\$0.00	\$0.00
5. Supplies	\$500.00	\$500.00	\$0.00	\$1,000.00
6. Contractual	\$30,000.00	\$0.00	\$0.00	\$30,000.00
7. Other	\$0.00	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$49,100.00	\$33,425.00	\$0.00	\$82,525.00

FISCAL YEAR 2017 ACTUAL BUDGET SUMMARY & TABLE

Total Expended by Powell County = \$33,425.00

Total MLIA Share = \$49,100.00

Category	MLIA Share	Applicant Share	Other Share	Total
1. Personnel	\$0.00	\$25,000.00	\$0.00	\$25,000.00
2. Fringe Benefits	\$0.00	\$7,925.00	\$0.00	\$7,925.00
3. Travel	\$3,000.00	\$0.00	\$0.00	\$3,000.00
4. Equipment	\$0.00	\$0.00	\$0.00	\$0.00
5. Supplies	\$500.00	\$500.00	\$0.00	\$1,000.00
6. Contractual	\$30,000.00	\$0.00	\$0.00	\$30,000.00
7. Other	\$0.00	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$49,100.00	\$33,425.00	\$0.00	\$82,525.00

STATEMENTS OF SUPPORT

Powell County is pleased to submit two Statements of Support with this application.

RENEWABLE GRANT ACCOUNTABILITY NARRATIVE

Powell County has a proven record of accomplishment of managing grants. Although, Powell County has not previously applied for a MLIA grant, the County feels confident that we can successfully achieve the stated goals for this grant. Powell County will prepare and deliver a progress report on a quarterly basis along with budget financials supporting draw requests.

AUTHORIZING STATEMENT

I hereby certify that the information and all statements in this application are true, complete and accurate to the best of my knowledge and that the project or activity complies with all applicable state, local and federal laws and regulations.

I further certify that this project will comply with applicable statutory and regulatory standards.

I further certify that I am (by my signature) authorized to enter into a binding agreement with the Montana State Library to obtain a grant if this application receives approval.

Brian P. Bender, AICP

Powell County Planning Director

Signature and Title of Authorized Representative(s) of Public Entity Applicant

Date February 15, 2012
